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ABSTRACT

A study was conducted to develop baseline information about the cost effectiveness of cooperative vocational education to be used in teacher education programs in Pennsylvania. Information gathered included data on cost effectiveness, types of occupations for which students were prepared, the effect of school dropout and youth employment on local labor markets, the public relations effect of cooperative programs, the personality effect on cooperative education students, and the effect on career decision making. Information was gathered from employers, guidance counselors, parents, students, local employment offices, and unit superintendents about six county-wide programs in the state (Clearfield, Erie, Fulton, Lehigh, Schuylkill, and York). Analysis of findings from these data resulted in the following conclusions, among others: (1) cooperative vocational education is very cost effective from the point of view of employers, guidance counselors, parents, students, and school administrators; (2) cooperative education has a positive effect on youth unemployment and school dropouts; (3) state employment offices see cooperative education students taking jobs that could go to older workers; (4) cooperative education programs tend to discriminate by sex; and (5) cooperative education tends to reduce the need for teachers. Recommendations were made for expanding cooperative education to more females, increasing training of teachers involved in the programs, offering more career exploration programs earlier, expanding public relations consciousness, and making more efforts to keep vocational education in tune with changing technologies. (KC)

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Cost Effectiveness of Cooperative Vocational Education for Capstone and Diversified Occupations

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Pennsylvania Department of Education
Bureau of Vocational Education
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INTRODUCTION

Since the passage of the Vocational Education Act of 1963, and the Amendments of 1968, much emphasis has been placed on Cooperative Education Programs at the secondary and post-secondary levels of education. Our highly technical society demands high quality vocational programs to meet the needs of this rapidly expanding technological age.

A major question facing cooperative vocational education programs is, "How effective are these programs in relationship to the costs of operating them?" In response to this question, this study will attempt to clarify the benefits of cooperative education to students, parents, school and employers, as opposed to program costs.

Problem

The Pennsylvania State University and other teacher education institutions are attempting to improve the quality of cooperative vocational education instructors throughout the state. We also have a new certification for supervisors of cooperative education. However, we need baseline information to assist the state and the universities in making decision in the area of cooperative education in terms of benefits and liabilities, as well as future cooperative education efforts. We need information pertinent to Pennsylvania to assist in the preparation of cooperative vocational education coordinators and supervisors.

Related Research or Background Information

Two major studies have been done in recent years related to cost benefits of cooperative vocational education. One, by Slick-Welch (1974) strongly suggested that cooperative vocational education students had less unemployment,

progressed faster on the job, was more satisfied with their school and work, worked with less supervision and was paid at least $18 to $23 more per week than their vocational in-school counterparts who had not had cooperative vocational education training.

The second, Lewis, and others compiled by the Center for Research for Human Performance here at The Pennsylvania State University, under the direction of Dr. Jack Kaufman, had consistent findings in the non-financial areas of cooperative vocational education. He did, though, find that cooperative education costs $125 more per pupil than did regular vocational programs and that the students did not receive any additional benefits in terms of increased salaries.

There are several other studies related to cost benefits. Mainly, Molnar and others (1973) and the National Association of Secondary School Principals (1975). Molnar found that when he used two different cost measures, costs per student and annual cost per student hour, he got mixed financial results. One favoring non-cooperative education students and the other favoring students in cooperative vocational education.

The National Association of Secondary School Principals had an exhaustive study of 50 cooperative education programs throughout the country and related many positive findings from different types of cooperative education programs. However, none related to the specific objectives outlined in this proposal.

These studies were mostly undertaken by questionnaires, with some personal interview follow-ups, but not the extent that we propose for actually visiting local labor markets and determining first hand, the needed information.

Objectives

The objective of the project is to develop baseline information to be utilized in teacher education programs for cooperative vocational education

certification throughout the State. This baseline information will include the following:

1. cost effectiveness of cooperative vocational education and the diversified occupations and capstone programs throughout the state;

2. the types and levels of occupations for which cooperative vocational education students in these various cooperative education methods are employed;

3. the effect of school drop-out and youth employment rates that cooperative education has in local labor markets and school districts;

4. the public relations effect on the school, in both vocational and general education programs;

5. the adjustment or personality effect of the cooperative education experience on students;

6. the effect of career decision making, and

7. to collect the above data and include it in a monograph that will be distributed throughout the State of Pennsylvania for use in all teacher education programs, as well as being used by the Department of Education concerning their decisions on future efforts in cooperative education.

PROCEDURES

Introduction

Students, parents, employers and school officials were surveyed to determine the cost and benefits of cooperative education. Local employment offices were also contacted to determine what effect, if any, the cooperative education program had on the youth unemployment in the area. The procedure called for several on-site visits to each county program. The first meeting in each county was to explain the project and to solicit the cooperation of the school officials. In each county the school officials were extremely cooperative and contributed greatly to the success of the project. Subsequent visits were to collect the necessary data.

Population

The population for this study was six county wide co-op programs. They were: Clearfield, Erie, Fulton, Lehigh, Schuylkill and York. Clearfield, Fulton and Schuylkill counties were in the first year of their county-wide program while the other three were older, well established programs. They represent different labor markets from the different sections of the State.

Employer Questionnaire

Two groups of employers were surveyed. The first group was employers who were participating in the cooperative education programs. The second group was non-participating in employers. The names of the participating employers were obtained directly from the school officials, the non-participating employers came from the telephone Yellow Pages. It was determined from the onset of the project that the non-participating employers would return at a lesser rate than the participating employers, thus

approximately 40 percent additional non-participating employer questionnaires were sent than participating employer questionnaires. This was to obtain an adequate response. To contact the non-participating employers every seventh to every twentieth employer in the yellow pages was sent a questionnaire. This number varied with the number of employers that were needed in each county to complete the study. The participating employers received their questionnaire directly from the cooperative coordinators. They were then mailed back to PSU for tabulation. The non-participating employers, were asked their overall opinions on the effectiveness of the local school system, the vocational school program, and if they had been involved in cooperative education in the past. There was also an open-ended question to react to the effectiveness of any of the programs within that school district. The questionnaire for the employers that were participating in the cooperative education program was designed to determine their attitude toward the employment of cooperative education students, their attitude toward hiring cooperative education students, and comparing these students with their regular employees. In this questionnaire there was also an open-ended question which provides the employer an opportunity to comment as to how they perceive the program.

Guidance/Questionnaire

Each counties program was coordinated through their area vocational-technical school, with the exception of Fulton County which at this time does not have an area vocational-technical school. This was coordinated through the McConnellsville School system. Guidance counselors from the area vocational-technical schools, and participating schools in the county-wide cooperative education program were sent questionnaires.

The guidance counselors were asked as to what effects of the cooperative education program had on student dropout rate, absenteeism, overall school grades, school behavior, as well as their opinion of the cooperative education program is as a concept and how well it is coordinated within their school district. Also, there was an open-ended question which they were to provide input into the cost and effectiveness of the cooperative education program in their district.

Parent Survey

The parent survey form was developed to provide comparison between parents of cooperative vocational education students, vocational students, and academic students, and their perceptions how well they liked the respective educational programs. Questions were asked if they felt the program was adequately preparing their children for a future career or if the program was providing them with a clear idea of what areas they would like to pursue. Also, there was a comparison of cost between their senior years and previous years in terms of expenses for food, clothing, transportation, educational supplies, insurance and miscellaneous costs. In the co-op and vocational parent surveys, was an added question which asked if the respective vocational program they were in increased his/her learning interest in school? Also, in the co-op student's parent questionnaire, there was asked what they liked least about the co-op education program.

Student Survey

The survey form was developed for students who were in vocational programs, academic programs, and cooperative vocational programs. It asked for demographic information about the student and their family, their likes and dislikes in the school program, his/her attendance record, if they had ever

considered dropping out of school, their future plans after graduation. They were also asked if they were presently working while attending school and then a series of questions which ascertained what effect this working had on their school activities. They were also given a career maturity questionnaire to complete.

Local Employment Office Interview

The six county-wide cooperative vocational education programs were serviced by six Pennsylvania employment offices. Each office was contacted and, through an interview process, questions were asked to determine what type of relationship existed between the employment office and the school, their understanding of the program within the school system. They were asked what affect they felt the cooperative vocational education program had on the overall youth unemployment in the area. Youth unemployment was determined to be between the ages of 16 and 25. They were also asked what their feelings were concerning the overall effectiveness of the vocational and cooperative vocational education programs in their area.

Local and Intermediate Unit Superintendent Interview

While at the onsite visits, intermediate unit superintendents or their representative, along with several participating school superintendents, were contacted and, through personal interview, were asked questions concerning the effectiveness of the cooperative vocational education program. Their opinions were asked concerning what affect co-op had on school dropout rates, school behavioral problems, vandalism and academic grades. They were also asked to speculate what action they would take if the cooperative vocational education programs were eliminated. They were also asked what affect decreasing enrollments, along with releasing cooperative education students

for a portion of a day, had on the employment of other teachers, particularly elective area teachers. Specific questions in this area were related to the possible elimination of teaching positions in their school systems.

Additional Data Gathering Sources

Additional information on costs of various education and vocational education programs were gathered from the files of the Pennsylvania State School Study Council. The questionnaire was developed and sent to each area vocational technical director for their response. This questionnaire was developed to ascertain the costs of the cooperative vocational education program in comparison to costs of other vocational programs within the school system.

FINDINGS AND DISCUSSION

Introduction

Six county-wide cooperative vocational education programs provided the findings for this study. They were: Clearfield, Fulton, Lehigh, Erie, Schuylkill, and York counties. In each county there were several on-site visits to obtain the cooperation of key school personnel, both in the co-operative vocational education and general education programs. In each instance, it was found that school officials were cooperative and willing to participate in this project. Various school systems and intermediate units were contacted with letters, informing them of our intent and to obtain approval from the various school boards, thus eliminating the need for special permission forms to be sent to parents for the purpose of gathering data from students. The findings, and the discussion of the findings, will be broken down into several categories, which will include the people that were contacted for input for the study. They were the employer, guidance counselor, parent-student, employment office, and chief school officers/superintendents.

Employers

There were two categories of employers, those presently participating in the cooperative vocational education program and those employers who were not participating in the program. One thousand-fifty questionnaires were sent to employers who were participating in the co-op program, with 464 or 44.2 percent returned. Fourteen hundred and sixty-six questionnaires were sent to non-participating employers with only 260 or 17.7 percent returned. The non-participating employers return was too small to make any major conclusions, yet the returns had some interesting results.

Non-Participating Employers. Overall, the non-participating employers felt that vocational programs in their communities were more effective than the academic programs, but generally felt both the vocational and educational programs were effective. Fifty-one percent of the non-participating employers felt that vocational education was keeping abreast of technology while 22 percent felt they were not and 27 percent were undecided. This suggests that vocational education either is somewhat behind in technology or not doing a good public relations job as to what they are producing. In terms of familiarity with cooperative programs, the non-participating employers generally were familiar with the cooperative education program and 90 percent were familiar with the program. Eighty-two percent of these non-participating employers felt that co-op was an excellent method of helping students to understand the world of work. In an open-ended question at the end of the questionnaire asking for comments, 10 employers felt that the high school graduates lacked reading, writing, math, and communication skills. Seven stated that vocational education was positive for the non-college bound, six stated cooperative education was a positive transition factor, eight said co-op needs expansion, six said vocational schools were not keeping abreast with technology (See Appendix for total listing).

Participating Employers. When asked how they first became familiar with the cooperative vocational education program, the response was some what different than expected (See Table 1). Less than 38 percent first heard of the co-op program through the cooperative vocational education coordinator, while one-third heard of the program first through students. School administrators accounted for 14 percent while fellow employers accounted for an additional eight percent. The big surprise was how few people heard of

Table 1

Source Participating Employer First Heard About Co-op

Source	No.	%	Source	No.	%
Students	157	33.84	Fellow Employer	41	8.8
Chamber of Com.	2	.43	Co-op Coordinators	175	37.72
Local Employment Ag.	4	.86	School Administrator	65	14.00
Civic Club	2	.43	Others	58	12.00

Total Response on this Questionnaire-404

the co-op program through their civic clubs or chamber of commerce, combined they were less than one percent. Twelve percent of the respondents suggested other sources, but did not identify them, those few who did identify them, suggested it was newspapers, relatives, church groups, teachers in a school, etc., but there was no pattern to this response.

Question 2 asked if they would have hired a regular part-time employee if the co-op student had not been available. Three hundred and five or 65.6 percent stated yes, but 160 or 34 percent stated no. This means that approximately one-third of all the training stations were created for the co-op student. This is an important finding and it suggests that co-op coordinators actually do create jobs or what is known with the CETA as job developers. Actually this has a stronger meaning when you consider that this is adding approximately one-third of the students to the employment force without actually taking a job away from a full or part-time employee from another sector. If over 50 percent of the students are hired by the employer, contributes greatly to youth employment without taking jobs from the pool for other unemployed people.

The average number of employees in this study, the employers had were 200. This is a meaningless piece of information for several large employers would cause the average to be high. The number of employers having 20 or less employees was 256 . This produces a better idea of the average employer in the sample. When asked how long they had been associated with a co-op program, the average was 3.6 years and they had had 8.4 number of co-op students over this time. Again, large employers having a large number of co-op students had a tendency to make this average higher.

When asking the employers the approximate number of co-op students they had trained that they had hired, the result came back very confusing. The actual number suggested on this questionnaire was a little above 50 percent, yet when looking over the responses, there was some confusion and employers did not actually understand the question and thus the results are somewhat less than desirable. Example: An employer who had two students, one presently training and one that he had trained in the past, when asked how many of these students he had employed, he stated 50 percent, which meant that he had employed 100 percent of all those who were eligible for the present student was not eligible for employment. We feel that if the question had been properly stated, the number of persons hired would have been in excess of 50 percent. The national average seems to hover around 60 percent and we believe our figure probably would approximate that, but due to the confusion in the question and not knowing how the respondent felt when answering it, we cannot accurately make any statement to this effect.

As to costs to train students, when comparing the costs with regular part-time employees, 41 of the employers or 10 percent felt that it cost more to train a co-op student than a regular employee while 201 or 50 percent

felt it cost less to train a co-op student than a regular employee. They felt that it cost 30 percent less in fact. One-hundred and sixty-one or 40 percent felt the costs were about the same for both groups. This raises the question "Is co-op truly an educational and training program, why does it cost less?" Perhaps the answer is in the inschool training which is provided for these students while on the job (See Table 2).

Table 2

Training Cost to Employers
Co-op Students Versus Regular Part-time Employees

	More		Less		Same		Undecided	
	#	%	#	%	#	%	#	%
Training Cost	41	10.	201	50	161	40		
Absent From Work	22	4.8	200	43.6	237	51.6		
Training Time	49	10.8	158	35	190	42	55	12.2

Absenteeism is a cost to employers in lost work and eventually lost profits. Co-op students were compared with regular part-time employment, we found that less than 5 percent of the employers felt that the co-op students were absent more than the regular employees. Two-hundred or 23.6 percent felt that they were absent less while 237 or 51.6 percent felt they were absent about the same. This suggests that employers were relatively happy with the absenteeism rate of co-op students or over 95 percent are consistent with employer's expectations of employees.

When asking employers about the effectiveness of training provided by the cooperative vocational education program in terms of the length of training time it took for co-op students versus regular part-time employees,

158 or 35 percent felt it took less time to train the co-op student, 49 or 10.8 percent felt that it took more time to train. One-hundred and ninety or 42 percent felt that there was no difference in the training time while 55 or 12.2 percent were undecided. Again, considering a training program, the results are encouraging for the most part, yet 42 percent felt that there was no difference in the training time of either group. This means either there were little training in the program or the inschool co-operative training had little effect on training time. The 10 percent plus who felt it took more training time might reflect more advanced training for the co-op student. There were some other variables that we probably should consider, the abilities of both the regular part-time employee and the co-op students, if they are both of equal intelligence and ability, then comparisons can be more realistic.

Employers were asked to compare the rate of progress after the initial training period of both the co-op students and the part-time students (See Table 3). Thirty seven point seven percent of the employers felt they progressed more rapidly than part-time employees, 57.6 percent stated there

Table 3

Employer Rating of Co-op Student Progress
on the Job After Initial Training
Versus Regular Part-time Employees

	Number	Percent
More Rapid Progress	167	37.7
Same Progress	255	57.6
Slower Progress	21	4.7

was no difference, while less than five percent stated they progressed slower than regular part-time employers. Again, this result seemed positive at first glance. There seemed to be some consistency with the results mentioned previously with approximately one-third of the students improved due to the program. If we are really working with potential drop-outs in areas in high youth unemployment, then this result is even more impressive.

In evaluating the preparedness of the cooperative education student by the training station, 72 percent of the employers felt that the students were adequately prepared while 28 percent felt they were not. Employers felt that the best preparation was in attitude, in fact 66 percent were prepared in this area. Fifty-six percent felt that they had adequate skill competencies while only 33 percent felt the students were emotionally ready for work (See Table 4). Many employers had both capstone and DO students,

Table 4

Employer Rating of Procedures of Students at the Beginning of the Training Period

Prepared	Number	Percent
Yes	295	72
No	113	28
Areas where they were best prepared		
	Number*	Percent*
Skill	202	56.7
Attitude	235	66.0
Emotional	118	33.2
No Comment	53	14.9

*Responded to more than one area.

thus it was impossible to separate the results of this question in terms of capstone or diversified education students. It would be hoped that the capstone student would be adequately prepared in skill competencies where the DO student would not. Of course, attitude is important and it is impressive to see that 66 percent of the people felt they had a good attitude. Interestingly, only 33 percent felt that they were emotionally ready for the job. Again, for the diversified occupation students, this perhaps would be their first involvement in any vocational preparation (See Table 5).

Table 5
Guidance Counselors' Survey

County	Sent Out N	Sent Out %	N	Return % of Sent Out	Percent of Total (152)
A	3	1.97	3	100	1.97
B	13	8.55	8	61.54	5.26
C	39	25.65	23	58.97	15.13
D	53	34.87	21	39.62	13.82
E	20	13.16	20	100	13.16
F	24	15.79	14	58.33	9.21
	152	99.99	89		58.55

Attitude seems to be one of the most important aspects an employer is looking for when hiring new employees. In asking how the student's attitude toward work was at the beginning of the training, the employers were very favorable. Thirty-one point seven percent said the student's attitude was excellent, 52.4 percent stated the student's attitude was good while only 13 percent stated it was average and 2.7 percent stated it was poor, with less than 1 percent undecided. With 84 percent of the employers feeling that the

student's attitude was above average this suggests that either the co-op program is attracting students with good attitudes or the program is improving the student's attitude before they are placed on the job. Another possibility of course is the coordinators realize that employers are looking for people with good attitudes and thus screen out those with poor attitudes.

There was an open-ended question which allowed the employer to add any additional comments, these are found in Appendix A. Generally, these comments were extremely positive to the cooperative vocational education program. Forty-six comments stated that they were very pleased with the co-op program. There are few comments worthy to mention here which could suggest some changes in the program. Ten of the employers felt the students could use more theory, 14 stated the student's attitude toward work was usually excellent, and it remains if you show an interest in the students and attempt to help teach them as they progress on the job, 12 stated they needed closer contact between school and industry, 8 suggested co-op as a legal excuse for the student to take off from school, six felt that the biggest disadvantage to the program is the students work week about or half-day about, six stated the students had basic knowledge, but lacked practical experience. Five stated that the training at the vo-tech school was not the same type that was experienced on the job.

Guidance Counselors

Questionnaires were sent to the total guidance counselor population, 150 guidance counselors in a six-county area. Eighty-nine or 58.6 percent returned their questionnaire. These guidance counselors came from both the area vocational-technical school and the comprehensive high school.

The results of this questionnaire indicated they had a very positive attitude toward cooperative vocational education.

Seventy of the 89 guidance counselors, or 78.7 percent, felt that the cooperative education program in their school affected the drop-out problem, while only 19 or 21.3 percent stated no (See Table 6). There was

Table 6
Guidance Counselors Opinion on Co-op's Effect on the Dropout Problem

	Frequency	Percentage
Yes	70	78.7%
No	19	21.3%

an additional question that asked what percent of people who were deterred from dropping out because of this program. Because both of the vocational guidance counselors and the academic guidance counselors in the home schools were the same students counting, it is impossible to state an accurate figure. The figure that had the most frequent response was between 5 and 10 percent, yet there were programs that suggested as much as 60 and one even included 100 percent of the population, this program was a CETA sponsored program for potential drop-outs and other disadvantaged individuals. It would seem by a visual scan of the information, that approximately 10 percent of the population may have been deterred from dropping out because of cooperative education.

The next question related to what affect cooperative education had on behavioral problems in the school. Only 5.6 percent of the guidance counselors felt that the co-op program had increased their behavioral

problem in their school, while 58.5 percent felt that it had diminished the behavioral problem within their schools. This is an impressive piece of information coming from the guidance counselors for they are the ones who would be counseling people who have behavioral problems. The question now arises are these the same students that the employers are so high upon? This of course can be attributed to the fact that the students may be in the program in which they like and feel it is helping them achieve their goals in the world of work. It also has eliminated study halls and other free time in the school where most vandalism and behavioral problems occur (See Table 7).

Table 7

Guidance Counselors Opinion on Cooperative Education's Effect on Behavior Problems

	Frequency	Percentage
Behavior Problems Increased	5	5.6
Behavior Problems Decreased	52	58.5
No Change	32	35.9

Eighty-five percent of the guidance counselors felt that co-op student's attitude with school changed positively while 4.5 percent felt it had changed negatively. Evidently, when the students are in a program which they perceive as benefiting them, their attitude changes toward the better (See Table 8). The guidance counselors felt that the school attendance was positively affected by the co-op program (See Table 9). Ninety-three percent of the guidance counselors felt that the cooperative program had some affect on improving the students attendance in school. Only one guidance

Table 8

Guidance Counselors Opinion of Effect on Student's Overall Attitude Toward School

	Frequency	Percentage
Changed Positively	76	85.4
Changed Negatively	4	4.5
No Change	9	10.1

Table 9

Guidance Counselors Opinion on the Effect of Cooperative Education on Student School Attendance

	Frequency	Percentage
High Effect	30	33.7
Moderate Effect	53	59.6
No Effect	5	5.6
Negative Effect	1	1.1

counselor out of the 89 felt that co-op had a negative effect. Generally, this is consistent with the findings reported of the employer consistent with what the students felt which will be reported later.

In the next question, we asked if the guidance counselors felt that the students involvement in the cooperative education program had any positive affect on his/her overall grades (See Table 10). Again, results were positive, 81 percent of the guidance counselors felt that the cooperative education program had a positive affect on the overall students' grades Again, one guidance counselor out of the 89 felt that it had a negative affect on student grades. There has been much debate in the past, over releasing students from school, feeling that this would have a tendency

Table 10

Guidance Counselors Opinion on the Effect of Cooperative Education on Student's Overall Grades

	Frequency	Percentage
Highly Effected	14	16%
Moderately Effected	58	65%
No Effect	16	18%
Negative Effect	1	1%

to lower their grades because of their commitment to the job rather than the school. Fortunately, these figures do not bear this out. Of course, there are others who say the student is only in school one-half a day, thus they can easily improve their grades. Whichever point of view, there seems to be a positive affect of cooperative education programs as to students overall grade point average.

The next question was to find out if the guidance counselors would recommend students with behavioral problems going into the cooperative education program (See Table 11). Only 82 of the 89 guidance counselors responded to this question, yet 67 percent said they would place students with behavioral problems in the cooperative education program. The next question asked if they would only place highly motivated students in a cooperative education program. Eighty-six of the 89 responded to this and 34 percent suggested they would place only highly motivated students in the cooperative vocational education program. These two questions suggest that about one-third of the guidance counselors feel that cooperative education program is for the highly motivated student or two-thirds of the guidance counselors feel it is for students even with behavioral problems (See Table 12). The next question was directed to attempt to find out the guidance counselor's opinion of cooperative education as a concept. An overwhelmingly number of

Table 11

Guidance Counselor Recommendations of Student with Behavior Problem(s) Being Placed on Cooperative Education

	Frequency*	Percentage
Yes	55	67%
No	27	33%

*Only 82 of the 89 guidance counselors responded to the question

Table 12

Guidance Counselor Would Place Only Highly Motivated or Interested Students Placed on Co-op

	Frequency*	Percentage
Yes	29	34%
No	57	66%

*Only 86 of the 39 guidance counselors responded to the question

guidance counselors, 99 percent said that it was a fair to excellent idea as a concept, while one suggested it was a poor concept. This one guidance counselor is the one who is consistently reflecting negative reactions to the questionnaire, either this guidance counselor has a poor experience or has some other reasons to be disenchanted with the cooperative education program (See Table 13).

Note, Table 14 where the guidance counselors have indicated how affectively they believe their cooperative education programs in their schools are coordinated. Fifty-three percent felt that their programs were highly affective coordinated, with 34 percent stating moderately affective. There

Table 13

Guidance Counselor's Feelings on
Concept of Cooperative Education

	Frequency	Percentage
Excellent Idea	71	80%
Fair Idea	17	19%
Poor Idea	1	1%
Unrealistic Idea	0	0%
Total	89	100%

Table 14

Is the Cooperative Education Program
Effectively Coordinated?

	Frequency	Percentage
Highly Effective	47	53%
Moderately Effective	30	34%
Not Effective	11	13%

*Only 88 responded to the question

were 13 percent stating that they felt that the cooperative education program was not affectively coordinated. In computing a correlation between various answers and the guidance counselors opinion on this question, we found several positive correlations. If the guidance counselor felt that the program was not affectively coordinated, the guidance counselor felt it had less affect on the dropout problem, school attendance, and school grades. In other words, if the program was properly coordinated in all districts, it would have an extremely positive effect on the students in the program as to grades, absenteeism, and dropout problems. There was one remaining question at the end of the questionnaire which was left open for the

guidance counselors to indicate their overall opinion of the cost effectiveness of cooperative education programs. The total response will be found in Appendix A, but three guidance counselors felt that the program needed supervision, two stated it had a positive effect on students and it should be expanded, two additional says whatever the cost, it is worth it. Two additional, stated the value of cooperative education could not be estimated in its cost and effect. Two additional stated they had seen it as a salvation for disruptive students.

Parent Questionnaire

Approximately 2,500 questionnaires were sent to parents of students enrolled in the six counties. Approximately, 625 questionnaires went to parents in each of the following categories: cooperative vocational education capstone students, cooperative diversified occupation students, vocational students, and academic students, the grand total was 1,327 or 53 percent returned (See Table 15). On those completing the forms, approximately 63

Table 15
Parent Returns (N=1327)

Person Completing	Co-op Capstone		Co-op Do		Voc.		Academic	
	#	%*	#	%*	#	%*	#	%*
Dad	103	34	83	29	89	25	111	29
Mom	190	63	194	68	242	68	261	68
Guardian	6	2	6	2	14	4	8	2
Other	3	1	2	1	11	3	4	1
Total	302	100	285	100	356	100	384	100
Do you feel your child has a clear idea about preparation for a future career?								
Yes	245	81	185	65	235	66	234	61
No	18	6	40	14	50	14	77	20
Not Sure	39	13	60	21	71	20	73	19
Total	302	100	285	100	356	100	384	100

*Rounded

to 68 percent of the people were mothers, with 25 to 34 percent fathers, one or two percent guardian or other categories. This was fairly consistent across the four groups. When asking the parents if they felt that if their child had a clear idea about the preparation for future careers. The vocational parents in general felt that their child had a better idea about their future than did the academic (See Table 15). Eighty-one percent capstone co-op parents felt that their children had a good idea about their future. Fifty-six percent of the vocational and 65 percent of the co-op DO felt that their children had a good idea about the preparation for their future.

Parents were asked how they liked the respective program their child was in (vocational, co-op, and academic), (See Table 16). Their responses

Table 16

Parents' Perspectives of the Child's Educational Program

Co-op Capstone	Co-op DO	Vocation	Academic
4.5%	4.3%	4.2%	3.8%

5=Like Very Much; 1=Dislike Very Much

were on a Likert scale, five equals, like very much, one equalling dislike very much. Generally, the parents were satisfied with their child's program. The academic parents were the least satisfied of the total group, with a 3.8 out of a possible 5, with capstone being most satisfied with a 4.5 out of a possible 5.

The parents were then asked, how they felt about the adequacy of the school preparing this child for a future career. In their responses on the Likert scale with 5 being strongly agree that it was preparing their child for a future, with 1 strongly disagreeing with that statement. In general, the parents were less satisfied with their child's high school preparing them for a future career than they liked the program in the previous answer. The vocational and academic were tied for the lowest, 3.5 out of a possible 5, with the capstone program more adequately preparing them for a future career, a 4.1 out of a possible 5 (See Table 17).

Table 17

Parents Perception if High School's is Adequately Preparing Their Child for a Future Career

Co-op Capstone	Co-op DO	Vocational	Academic
4.1%	3.9%	3.5%	3.5%

5=Strongly Agree; 1=Strongly Disagree

Expenses that parents incurred for their child's food, clothing, transportation, educational supplies, insurance, miscellaneous items was explored (See Table 18). The parents were asked to react to a checklist of the costs of these various items for this year compared to the cost of the same items last year. It was on the Likert scale 5 being extensive increase, 4 being just an increase, 3 being even, 2 being decrease, and 1 being decreased extensively. The academic student's parents costs were more than any of the others with the vocational student's parents next. The least costly increase, and in fact, three of the six categories there was a

Table 18

How Much Have Parents' Expenses Changed
For Their Child Compared to Last School Year?

5 = increased ext. 4 = inc. 3 = even 2 = decreased 1 = decreased ext.

	Cap.	DO	Voc.	ACA.
Food	3.5	3.3	3.7	3.9
Clothing	3.3	2.9	3.7	3.9
Transportation	3.6	3.3	3.6	3.9
Educational Supplies	3.0	2.7	3.2	3.4
Insurance	3.4	3.2	3.4	3.6
Miscellaneous	3.2	2.9	3.5	3.8

decrease, over last year's expenses was for diversified occupation students. Considering inflation and generally the senior year being more expensive than other years in high school, the cooperative education student, both capstone and diversified, must have been contributing much of their own earnings to their expenses. Considering that the parents of the co-op students liked their co-op program and felt it better prepared them for the future and that it cost them less in terms of increases over this year compared to last year, from a parent's point of view, vocational cooperative education program must be cost effected.

The parents of the cooperative vocational education students were asked least about their child's cooperative education program (See Table 19). The area in which the parents liked least was the problem with the transportation. This has been a traditional problem with cooperative vocational education because of the need for transportation to and from the work place, particularly in areas where there is no public transportation. The interesting response was that 41 percent of the capstone and 43 percent of the diversified occupations students' parents chose not to respond to this question. This suggests they have very few dislikes about the cooperative education program.

Table 19

Parents Liked Least About Their Child's Co-op Program?

	Capstone	DO
Working Hours	9%	16%
Attendance	3%	7%
Transportation	26%	24%
Leaving School	9%	13%
Other	12%	7%
No Response	41%	43%

The parents of the cooperative vocational education and vocational education students were asked if their child's respective program increased their child's learning interest in school. This was an overwhelming response to the positive in all three instances, with the capstone parents feeling more positive about their child's learning interest of school being increased because of the program. Fifty-three percent of the capstone parents felt that this increased their child's learning interest (See Table 20). Only one percent of the capstone parents felt that it decreased

Table 20

Parent's Perception of the Co-op-Voc Program Increased Their Child's Learning Interest?

	Cap.	DO	Voc.
Yes	93%	76%	86%
No	1%	10%	4%
Not Sure	6%	14%	9%

their learning interest in school. Eighty-six percent of the vocational parents felt that their program increased their child's interest in school and 76 percent of the diversified occupation parents felt that their program had increased their child's learning interest in school.

Students

Twenty-five hundred student questionnaires were distributed via the co-op coordinators and the guidance counselors for the vocational and academic students. For the capstone, nearly 100 percent of returns was achieved due to the students completing the form in the classroom and returning them to the teacher which then mailed them to The Pennsylvania State University. The diversified occupations program was attempted in the same way yet only 95 percent of these were returned due to many of the outlying school districts either did not get all the returns back or because of absenteeism in their program. Total response was 2,239 completed questionnaires out of a possible 2,500, or an 89.6 percent return (See Table 21).

Table 21
Student Responses (N=2239)

	Cap N=683	DO N=479	Voc. N=530	Academic N=505
Sex				
Male	77%	59%	56%	42%
Female	23%	41%	44%	58%
Race				
Majority	96%	94%	95%	97%
Minority	4%	6%	4%	3%

One of the interesting findings was that there were by far more males in the capstone cooperative education program than there were females, nearly four to one, where in the diversified occupations programs, closer, 59 percent males and 41 percent females. In the vocational programs, it was even closer yet with 56 percent males and 44 percent females. The academic program were 42 percent males and 56 percent females responding. This would suggest that more males go into capstone cooperative vocational education program than females. This is an area which probably should be looked into in the future. There may be some sex discrimination here. As to minority students enrolled, it was rather consistent across most of the programs with the exception of the diversified occupations program. Between three and four percent in the other three programs with six percent minority students in diversified occupations program. Considering the geographically areas which this population came, this minority population is not truly represented of the minority population in those communities, but most cases it is within three or four percent.

A question which was asked to the students that participated, if they had a course in career exploration during their school program. This provided interesting results (See Table 22). Less of the academic students

Table 22
Student Having a Course in Career Exploration

	Cap	DO	Voc.	Academic
Yes	57%	67%	50%	42%
No	43%	33%	50%	58%

that had a course in career exploration than any of the programs, vocational education was split evenly between those who had, had a career exploration program than those who had not. The program in which more students had a career exploration program than those who had not. The program in which more students had a career exploration program was the diversified occupations program which had 67 percent and a program to help them decide on a future career. With both the diversified and capstone cooperative education program, students working in that area which is consistent with their career goals, it would seem that the career exploration program helped achieve this goal. It would suggest that perhaps more academic and vocational students had career exploration programs so they can make early career decisions.

The next question for the students was their grade point average. Each school has a different rating system for A,B,C, etc., thus a standard rating system was devised in order to put the scores into a standard form. The standard form was that 4 equaled 3-B, 2-3, 1-3, and 0-E (See Table 22). The grade point average as would be expected, highest for the academic student, almost a B, 2.98 with the next being capstone co-op student being a 2.84, vocational next with a 2.62 and the DO with a 2.54. The capstone student either improves his/her grades as they go into the cooperative ed program or only the best vocational student is selected for the cooperative capstone program.

The next question asked each student how they liked the academic program or academic part of the program that they were enrolled (See Table 22). Again, the academic students liked their program better than any of the others, but the capstone and DO liked their academic programs better than the vocational student. This was on a five-point Likert scale with a

5=liking very much and a 1 disliking very much, with a 3 being neutral. The academic student got a 3.7, with the vocational students having a 3.0, which is neutral.

The co-op and vocational students were asked an additional question if they were satisfied with the respective vocational program, with the capstone program, the DO program, and the vocational program. The Likert scale was also used with 5 equalling liked very much (See Table 22). The capstone students liked their program more than any of the others with a 4.4, but all three of the vocational programs liked their program better than they did the academic program and better than the academic students liked their academic.

The next question was the amount of days that they felt they were absent during the school year. Capstone students felt they were absent the least amount of days, on an average of 7.9 per year, with the academic being a close second with an 8.1. Vocational students were the most absent with 11.4 per-year (See Table 22). A Likert scale was devised to determine if any of these students had ever considered dropping out of school, again a 5 was very seriously thought of as dropping out, with a 1 being never considering dropping out (See Table 22). The academic student had the least tendency to drop out with a 1.42, capstone next and the one with the largest tendency to drop out of school with a 1.6. This is an interesting finding especially when the guidance counselors suggested that the cooperative education program was assisting in preventing the dropout problem within their schools. Each student was asked the type of job, if they had a job and what type of job that they had. It was discovered that 99.4 percent of the capstone students were presently holding jobs, 98.7 percent of the DO students were presently

holding jobs, with only 44.4 percent of the vocational students holding jobs, and 49.4 percent of the academic students holding jobs. The one percent or more of the co-op students were out of jobs were those who were just terminated or had just transferred into the program, thus, it is consistent to find that most of the co-op students would be holding jobs (See Table 23).

Table 23
Student Employment

	Cap.	DO	Voc.	Academic
Percent Presently Holding a Job	99.4	98.7	44.4	49.4
Wages per hour	3.31	3.16	3.02	2.49
Hours per week	31.6	26.6	21.2	15.9

Next, we asked the students their hourly wage while on their part-time jobs or cooperative vocational education training programs (See Table 23). Capstone students earned $3.31 an hour, with the DO second with $3.16/hour, vocational with $3.01, and the academic $2.49/hour. The minimum wage in the State of Pennsylvania is $2.90/hour at the time of this survey, yet the state student wage at this particular time was $2.40/hour, which means the academic students were earning just about the minimum student wage, but the capstone students earned at least an average of $.40 more per hour than state and federal legal minimum wage. We also found that the capstone students worked 31.6 hours per week, the DO students working 26.8 hours per week and those vocational students who held a job worked 21.2 hours per week and the academic only 15.9 per week (See Table 23). It was interesting to learn that the average capstone student was making $104.60 per week, the average

diversified occupations student was making $84.05/week, the average vocational student that was working made $64.02 and the average academic student that was working made $39.40 per week. Although the DO student earned less than the capstone student, in looking at the parents survey, it appears that this student was contributing more to his educational costs than were the vocational capstone students. With the co-op student earning, this type of weekly wage, it is no wonder that they are enthusiastic about and very satisfied with their cooperative vocational education program. With absenteeism declining, grade point averages going up, having less problems in school and making the kind of money that co-op education students do, it appears that the co-op program is extremely cost effective to the student. One other piece of information that was gathered from these students about their parents was who was the head of the household. It was felt that if there was any significant difference in terms of who was head of the household in the groups, they may be able to explain some of the differences in some of the reactions to our questions (See Table 24).

Table 24
Head of the Household

	Cap.	DO	Voc.	Academic
Dad	86.2%	82.8%	80.6%	88.8%
Other	13.8%	17.2%	19.4%	11.2%

Although there were some differences in terms of heads of households, the differences were not great between program, but there were some differences between the two extremes. Eighty-eight point eight percent of the academic

students stated their father was head of the household, 86.2 percent of the capstone students father was head of the household, with 82.8 percent of the DO students father head of the household, with only 80.6 percent of the vocational students father head of the household. Perhaps some of the reasons why students go into vocational education is that they have to early in their life help their parents support their family and vocational education is one way to do so, it could also be true of the co-op programs.

In one part of our questionnaire which turned out to be a part of Jeannine Fan Subisak's doctoral dissertation, through a very sophisticated reliable and valid career maturity scale, assessed the maturity of the four groups of students. The range was 39 to 195, with 117 equalling neutral. It was discovered that the seniors in the various vocational and academic programs were rather career mature. The academic students were the most career mature, with the capstone second, the DO and vocational students tied for a close third. Many studies suggested that career maturity is a product of intelligence, but we again consider the guidance counselor's feelings about who they would place in cooperative education program and the fact when we checked on grade point averages, we did discover there were some differences. It seems that the cooperative education program does have a tendency to improve the student's career maturity, with intelligence and other things being equal. Another interesting aspect is that although the academic student does not have a career information course which would help them become more career mature, they did in fact score higher than the groups which had more career maturity programs.

Employment Office Interview

Employment offices, within a six-county labor market area, were contacted for their overall thoughts on the cooperative vocational education program. This was handled through an interview process with the employment office manager and his staff. Questioning concerned three general topics: 1) type of cooperation between the area vocational-technical school or the educational program and the employment office, 2) affect cooperative vocational education has on the youth unemployment in their labor market area, and 3) overall feelings and concerns regarding the cooperative vocational education program in their specific labor market area.

There was a varying degree of cooperation among the various vocational schools, secondary educational programs and employment office. There was a positive attitude at first, but as the questioning continued, a feeling existed that cooperation was on a superficial and limited level. Generally, the opinion expressed on both the cooperative education program and the school was positive. The second aspect concerned the affect cooperative vocational education had on youth employment; this was more difficult to obtain. They did not identify people with cooperative education backgrounds as people looking for a position. Although, in talking with their staff, it was determined that very few people, if any, came into their office looking for employment and stated they had been in a cooperative vocational education program. All six labor market areas felt that the cooperative vocational education program had a positive affect on youth unemployment in their area. During the third part of the interview, they were asked what their overall feelings were concerning the cooperative vocational education program and its operation within their labor market area. They had several major areas of concern which appeared to be fairly consistent throughout the six labor

market areas. At first, they did not feel that the cooperative vocational education coordinator was utilizing the information that was available from the employment office to the fullest extent. They also felt if an additional staff member who could secure job sites was available to them, they could do a better job in helping to lower the youth unemployment rate. Third, they felt maybe there were some negative effects on full-time workers, and particularly, head of households obtaining positions because cooperative vocational education students would be employed in positions that may have been available to heads of households or other people looking for employment in the labor market.

Chief School Administrator Interview

The chief school administrator for the intermediate unit, area vocational technical school or school district, that is responsible for the county-wide cooperation vocational education program was interviewed. We were looking for their input concerning the following areas: 1) overall effectiveness of cooperative education programs, 2) benefits concerning the dropout rate, absenteeism, vandalism, etc. in the school, 3) cost to the cooperative vocational education programs, including staff and travel, 4) speculation concerning the effect low student enrollments and increasing number of cooperative vocational education students would have on staffing patterns with the school district.

At least one school administrator from each district was contacted, (when possible, it was the chief school administrator for the intermediate unit). There was the consistent feeling that the cooperative vocational education programs in the county was an affective approach and should be utilized more fully in the future. The administrators also felt it had a positive effect on lessening the school dropout rate, absenteeism within

the school, vandalism, and discipline problems. Unfortunately, they had no concrete data except the informal reports given to them by guidance counselors, high school principals, and other people appearing before the school boards.

The cost of the cooperative vocational education program varied from profit-making to $468. Two school administrators felt that either there was no cost or they made a profit on the cooperative vocational education program. This was due to the added financial reimbursement of vocational funds and Weighted Average Daily Membership(WADM), which is a formula for supporting educational programs by the State of Pennsylvania. This WADM increase was due to the positive effect on the dropout situation. All administrators stated that the cooperative vocational education program was relatively inexpensive and added that it had a very positive cost benefit ratio.

There was speculation concerning the effect the elimination of the cooperative vocational education program would have on the school district. This question was asked because other studies, which were done mostly by economists, stated that cooperative vocational education was an add-on program, thus it was a complete expense to the school. This study would determine if the cooperative vocational education program was added, would it be the least expensive alternative? Administrators from two counties felt it would be impossible to accommodate the students if the cooperative vocational education program was eliminated. In each case, the student who had been released to work on co-op would be replaced by an undergraduate student, therefore, the shops and labs were maintained to capacity. If they had to, they would eliminate the pre-vocational or vocational programs for underclassmen which they felt would have a negative effect on the entire school. One superintendent suggested that he would need to have a quarter of a million dollars in capital expenses to add three additional vocational

programs and employ one additional teacher, this would be in addition to their present co-op coordinator. All administrators suggested that it would be a burden to do this and it probably would have a negative effect on drop-out rates, vandalism, school discipline problems, etc. The four additional administrators felt that the students could be accommodated in their school, although they would not necessarily be enrolled in vocational programs. They would be enrolled in general education or less popular elective courses and study halls to accommodate this activity. All the county administrators felt that the diversified programs could be accommodated in the home school, but they could not offer vocational alternatives for these students.

The reaction was mixed with regard to immediate or long-term effects of the increased utilization of the cooperative vocational education programs, with low or overall student enrollments. Four of the six county superintendents felt there would be no immediate (in the next year or two) effect on the number of faculty. The administrators from two counties felt that teachers who would retire might not be replaced because of decreasing enrollment, combined with the expansion of the cooperative vocational education programs in their county. Five of the six county administrators felt that over the long-term (three to five years), there would be an effect on the number of teachers needed in the elective subject area if the cooperative programs was to be expanded and the declining enrollment continued. All but one of the county administrators suggested that the decreasing need for teachers could be accommodated through retirement rather than through furloughing of teachers. One county superintendent suggested that furloughing was very possible and in fact, probable the next year. One county superintendent felt that too few students came from each school in their county DO program to have any effect on the number of teachers needed in their school program.

Six county-wide cooperative vocational education programs in various sections of the state were surveyed through questionnaires and on-site visitation. There were 2,197 students, of this 505 were academic, 530 vocational students, 479 diversified co-op students, and 633 capstone co-op students. One thousand three hundred and twenty-seven parents, of this 384 were parents of academic students, 356 were parents of vocational students, 285 were parents of diversified co-op students, and 302 were parents of capstone students. There were 724 employers, 464 participating in cooperative education programs and 260 not presently participating in cooperative education programs. Eighty-nine guidance counselors from both vocational and academic programs and six representatives from the Pennsylvania Employment Office in each of the county's labor and major market areas, also the chief school administrator of each county were interviewed.

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Non-Participating Employers

The response rate of non-participating employers were too few to make any realistic inferences in this sample. Ninety percent of these people were familiar with cooperative vocational education programs and 20 percent felt that vocational education was not keeping abreast of technology.

Participating Employers

Thirty-eight percent of participating employers became familiar with cooperative education through the cooperative education coordinator while 34 percent came to it through students and 35 percent of all cooperative training stations were created especially for the co-op student. Ninety percent of the employers felt the cost either less or same amount to train a cooperative education student in any regular part-time employee, 45 percent

of the employers felt that students were absent from work less than regular employees and these participating employers felt it took less time to train the co-op student than it did the regular employee. After the initial training period, 38 percent of the employers felt that the co-op students progressed faster than the regular employees, while 57 percent felt they were the same. Seventy-two percent of the employers felt the students were ready and well prepared to work at the beginning of the training period. An area in which they were least prepared was emotional.

Guidance Counselors

Seventy-nine percent of the guidance counselors felt that co-op had helped to eliminate the dropout problem, 53 percent stated the behavioral problem decreased when the student went into co-op, 85 percent felt that the co-op student had more positive attitude toward the school, 34 percent felt that the co-op ed program was highly effective in improving student attendance. Eighty-one percent felt that co-op education program had a high to moderate effect on student's grades. Sixty-seven percent of these guidance counselors would recommend students with behavioral problems while 34 percent said they would only recommend the more highly motivated and interested. Although 53 percent of the guidance counselors felt the program was effectively coordinated, 13 percent felt it was not and the correlation between the effective cooperative vocational program and the guidance counselor's answers to other variables was significant at the .01 level, the positive correlation had a strong effect on dropout problems, overall attitude toward school, school attendance and grades.

Parents

Most parents felt that their child had a clear idea of preparing for a future. In comparing the present year with the past year, co-op parents

spent less than the vocational or academic parents on food, clothing, transportation, and educational cost. When the co-op parents were asked what they liked least about their child's co-op program, 41 percent did not respond, 26 percent stated transportation problems were the major concern.

Students

The cooperative capstone program was dominated by males with a DO program and vocational program having a more even split. The academic program had 42 percent males and 58 percent females. The diversified occupations had more minority students than did the other three programs, more co-op students said they had career exploration programs than did any of the other groups. In terms of grade point average, the academic student had the highest grade, 2.98 out of a possible 4, capstone had a 2.84. In terms of absenteeism, capstone students were absent the least of any student, with academic a close second. The scale to determine dropout tendencies was found that the DO student and the vocational students had the strongest dropout tendency, with capstone and academic having the least. In terms of wages, the capstone students earned $3.24 per hour and worked an average of 32 hours per week while the diversified occupations students earned $3.16 per hour and worked an average of 27 hours per week. On a career maturity scale, the academic and capstone cooperative education students were more career mature than were either the vocational or diversified.

School Administrators

School administrators felt that cooperative education programs were very cost effective and elected subject areas. Teachers probably would be furloughed because of students going into co-op coupled with the decreasing of enrollment problems that they are having within the communities.

State Employment Office

All state employment offices felt that cooperative education programs had a positive effect toward youth unemployment, but cautioned that the children may have gotten jobs at the expense of older adult workers.

Conclusions

1. Vocational education may not be keeping up with the rapid changes in technology.
2. Most employers are familiar with the cooperative vocational education program.
3. Cooperative vocational education instructors are job developers, with one-third of all cooperative programs being created for cooperative education students.
4. Employers find that cooperative vocational education programs are cost effective and a major recruiting process for new employees.
5. Employees are generally satisfied with the students sent to them at the beginning of their training program.
6. Cooperative vocational education programs tend to ease the dropout problem, improve the grades and school attendance, and improve the attitude of students toward school.
7. The majority of guidance counselors place potential dropouts into the cooperative education program.
8. Poorly coordinated cooperative education programs negatively affects the potential benefits of students.
9. Parents see the cooperative education program as cost effective and is effective in helping their child prepare for a future career.
10. Cooperative education students tend to assist their families in financing their educational related expenses.
11. Parents see transportation as a problem in the cooperative education program.
12. Capstone students tend to earn more money per week than do DO students while in their training program.
13. Cooperative education tends to increase career maturity.

14. Cooperative education has a positive affect on youth unemployment and school dropouts as suggested in the 1968 Vocational Education Amendments (Part G), and the 1976 Vocational Education Act (Section 122).

15. School administrators see co-op as cost effective and a positive influence in the total education of the child.

16. Cooperative education, coupled with the reducing school enrollment, tends to eliminate the need for teachers particularly in the elective area.

17. State employment offices sees cooperative education students taking jobs which could go to older workers.

18. Cooperative vocational education is very cost effective from the point of view from employers, guidance counselors, parents, students, and school administrators.

19. Cooperative vocational education programs tend to discriminate by sex.

20. As the number of hours for the co-op student worked per week increased, there was no negative effect on school grades.

Recommendations

1. More vocational students, particularly female, go into capstone vocational programs.

2. DO programs be expanded to all schools and to include more students.

3. More inservice and preservice training for co-op coordinators focus on more effectively coordinating programs.

4. Vocational education programs, particularly the cooperative vocational education program, work more closely with the state employment offices.

5. Vocational Education looks closely at its effort to keep abreast of the changing technologies in industry.

6. All education, but particularly vocational education, be more public relation conscious, particularly dealing with parents and employers.

7. Teachers with cooperative education backgrounds be hired as job developers for vocational graduates who do not go through the cooperative education program.

8. More career exploration programs be offered to students earlier in their school program.

Recommendations for Further Study

1. A study be undertaken to determine if the cooperative education public relations program, with civic clubs, chamber of commerce, etc., is affective.

2. A study be undertaken to determine the relative costs of employers for training vocational graduates who have not gone through cooperative education programs in comparison to those who have.

3. To study the various costs and benefits to employers, students, and schools for highly motivated students versus problem students entering the cooperative education program.

4. A study to determine why cooperative vocational education programs appear to be discriminating by sex.

5. A study be undertaken to see if vocational education is keeping abreast of technology.

6. A study be developed to see the percent of cooperative education students stay with their training employers or find jobs in their career training area.

7. A study to determine why students go into or stay in vocational education with no interest or intent of following that area as a career.

8. A study be undertaken to determine ways in making the cooperative education students more emotionally ready for a job at the beginning of their cooperative education program.

9. A study to look at the characteristics of successful cooperative vocational education coordinators to determine what characteristics seem to make them more effective.

APPENDIX A

Non-Co-op Employers
Guidance Counselors
Co-op Employer
Parent Survey

Non-Co-op Employers

1 Not willing to participate because of legal problems with unemployment compensation.

1 Students need guidance counselors who know and like their job.

1 It is my understanding that more students would like to attend vo-tech, but cannot because of limited space.

1 Students go through vo-tech programs and then switch careers upon graduation.

1 More needs to be done to positively influence the attitudes of teachers including elementary and intermediate, toward vocational education and co-op programs.

1 A major detrimental factor is state regulations which force local schools to be custodial institutions. This state needs regulations which permit selected students to leave school at the point where the school can no longer provide a learning experience.

3 I think more vocational programs should be made available in schools.

8 Co-op needs expanded.

10 High school graduates lack reading, writing, math and communication skills.

6 Vocational schools not keeping up with advanced technology (auto mechanics and graphic arts).

7 Vocational education is positive for non-college bound students.

1 Vocational students lack initiative to stay busy when in the "world of work."

2 Employer involvement is a key factor in educational progress.

1 Vocational classes are too crowded to give each student supervised "hands on" experience.

2 Need more involvement of parents in education of students.

1 Cease using D.E. program as a "catch all" for "dummies."

6 Co-op is a positive transition factor.

2 Co-op students feel they deserve more money than regular employees.

1 Vocational programs deter drop-out.

1 Too much theory and more "hands on" experience.

4 Need better program than 1/2 day and week about.

1 Need closer screening process for vocational students.

1 Vocational education is an "easy way out."

2 Student use co-op just to earn money.

2 Need post graduate intern program to coincide with high school co-op.

1 Need more career exploration type courses.

1 Trade schools work better than vo-techs.

Guidance Counselors

2 Co-op is positive for students--should be expanded.

1 Students are on co-op for "earning" not learning.

1 Saving district money because through co-op and attrition, one new teacher may not be needed.

1 Need this type program for students who are 16 and in 7th and 8th grade instead of just seniors.

2 Whatever the cost (within reason), it is worth it.

2 Values of co-op ed cannot be estimated as a cost effect.

1 Program is costly in terms of starting wages, employer supervision and cost to school district for transportation.

2 I've seen it be the salvation for disruptive students.

3 Program needs supervision.

1 Co-op permits students to earn their own way.

1 I personally feel that all students in this program should be placed on jobs of their future goals.

1 Too much freedom and lack of structure in the DO program.

Co-op Employer

3 Hire no other part-time employees because I liked to continue co-op student's employment after student graduates.

3 Students are adequately prepared for basic positions in the world of work.

5 More updating of teacher trade skills.

10 Students could use more theory.

46 Very pleased with co-op program.

1 As an employer, it saves me a lot of time at the beginning of a person's employment. After the first 2 to 4 months, I feel it is entirely up to the individual.

3 Students are less mature than regular employees, but advance rapidly.

6 Students have basic knowledge, but lack practical experience.

5 Not training at vo-tech for same type of work expected on the job.

6 The biggest disadvantage to this program is that students work week about and one-half day about.

2 Co-op students have additional experience lacking in regular employees hired.

1 Basic skill competencies are very good. Desire to work and attitude toward work are far better than average employee.

1 Would prefer employees who have completed a high school co-op program.

1 Vocational students have theoretically made a career choice and their interest shows.

1 Students don't realize that the classroom situation is the "ideal."

1 Students have a transition period to overcome from school to work.

1 We have discussed with school and cooperative education coordinator, closer and more thorough screening of these potential employees prior to their "on the job" work.

1 Basic training is fair. Need some training in economics and of job benefits.

1 Students need more training in dealing with the public.

1 Part-time (co-op) means minimum wage. The students usually seek full-time employment elsewhere.

1 Co-op students can be counted on to get the job done. Wished we had more like them.

1 Had excellent results with co-op students. They have a much better attitude toward work situation, something that is hard to find among other students.

1 I think that they should be taught how to dress, how to speak--basically, how to apply for a job.

3 I feel that students should stay with company for a year or two after graduation so company can realize their cost of training students.

1 Wants to work . . . . good motivation.

8 Co-op is a legal exercise for students to take off from school.

12 Need closer contact between school and industry.

1 I believe some students are sent out because they are a problem in school.

1 Co-op students are absent more because of involvement in school activities.

1 Much better than average employee.

1 Must stress that this is an ongoing learning experience.

1 Good community relations because of co-op.

1 Too much emphasis placed on wages.

14 The students' attitude toward work is usually excellent and will remain so if you show an interest in the students and try to help and teach them as they progress in their work.

1 Students in this program have more interest in learning facts and procedures than regular part-time employees.

1 Co-op program is no better than the individual in a program.

1 Co-op student definitely has the edge when hiring compared to regular employee.

1 Good program. Kept students from quitting school.

1 Need better communication between school, student and employer.

Parent Survey

What did you like about your sons/daughter co-op program?

1 Allowed student to work at a job not related to future career. Did not help student find a career-related job.

1 Coordinator.

7 Wages too low.

1 Bus control.

4 Inschool knowledge vs. more learned on job knowledge.

4 Difficult to do academic work after two weeks in shop.

7 Not enough INSKL training.

2 Job terminated at graduation.

1 Gives break from being bored in school.

7 Transportation a problem.

6 Guidance and supervision lacking.

1 Principal.

1 Job Security is poor.

1 It fills a need for those who cannot operate within the confines of a normal school program, but it does not educate them.

5 Should be allowed to work more hours.

6 Miss home school activities.

2 Tech school should be a full-time school.

2 Late working hours.

Not enough students qualify for co-op.

2 Discrimination shown by other students for co-op students.

1/2 day about it too time consuming.